



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/711,079

08/20/2004

Richard G. Burda

BUR920040031US1

9463

29154

7590

08/23/2006

FREDERICK W. GIBB, III
GIBB INTELLECTUAL PROPERTY LAW FIRM, LLC
2568-A RIVA ROAD
SUITE 304
ANNAPOLIS, MD 21401

EXAMINER

GARLAND, STEVEN R

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,079

Applicant(s)

BURDA ET AL.

Examiner

Steven R. Garland

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/20/04, 8/30/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 30-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/20/04, 8/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-37 are pending.
2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-29, drawn to supplying auxiliary equipment to a tool prior to workpiece arrival, classified in class 700, subclass 99.
 - II. Claims 30-37, drawn to method of inspecting auxiliary equipment in a priority ordering, classified in class 700, subclass 101.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility such as in a system in which the auxiliary equipment is not inspected but replaced on a predetermined schedule. See MPEP § 806.05(d).
4. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Mr. Rahman on 8/9/06 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-29. Affirmation of this election must be made by applicant in replying to this Office action.

Art Unit: 2125

Claims 30-37 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-3,5-7,9-14,16-21, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada 6,930,762.

Yamada teaches an exposure apparatus tool (photolithography device) which uses a plurality of auxiliary equipment masks (reticles) during semiconductor device fabrication on a wafer. Yamada further discloses the use of a plurality of masks during a job, supplying the masks in a predetermined order based on the time of their use (which mask is required first in time) , performing multiple jobs in a priority series, and prepositioning the masks based on the job requirements so that they arrive at the correct time. Yamada further teaches that the arrival order is based on both the job and the machine characteristics of how many masks the machine is capable of holding in the mask stage, prealignment device, etc. The storage means with the tables serves as means to determine the order of arrival of the workpieces. See the abstract; figure; col. 1. lines 9-18; col. 5, lines 10-54; col. 6, lines 11-67; col. 7, lines 1-30; col. 9, line 41 to col. 10, line 67; and the claims.

Yamada however does not expressly state that the jobs (wafers) are supplied or that the programming is stored in a medium.

It would have been obvious to one of ordinary skill in the art to supply wafer workpieces in the job order so that the semiconductor devices could be fabricated.

Further it would have been obvious to one of ordinary skill in the art to store the programming and tables of Yamada in the storage device so as to have a backup copy in case of a system crash.

10. Claims 4,8,15, 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada 6,930,762 as applied to claims 1-3,5-7,9-14,16-21, and 23-28 above, and further in view of Conboy et al. 6,457,587.

Yamada teaches an exposure apparatus tool (photolithography device) which uses a plurality of auxiliary equipment masks (reticles) during semiconductor device fabrication on a wafer. Yamada further discloses the use of a plurality of masks during a job, supplying the masks in a predetermined order based on the time of their use (which mask is required first in time) , performing multiple jobs in a priority series, and prepositioning the masks based on the job requirements so that they arrive at the correct time. Yamada further teaches that the arrival order is based on both the job and the machine characteristics of how many masks the machine is capable of holding in the mask stage, prealignment device, etc. The storage means with the tables serves as means to determine the order of arrival of the workpieces. See the abstract; figure; col. 1. lines 9-18; col. 5, lines 10-54; col. 6, lines 11-67; col. 7, lines 1-30; col. 9, line 41 to col. 10, line 67; and the claims.

Yamada however does not expressly state that the jobs (wafers) are supplied or that the programming is stored in a medium.

It would have been obvious to one of ordinary skill in the art to supply wafer workpieces in the job order so that the semiconductor devices could be fabricated.

Further it would have been obvious to one of ordinary skill in the art to store the programming and tables of Yamada in the storage device so as to have a backup copy in case of a system crash.

Yamada however does not teach modeling based on future events.

Art Unit: 2125

Conboy et al. teaches removing reticles based on usage history and upcoming wafers to prevent failure and also teaches prepositioning. See col. 7, line 1 to col. 8, line 58 and the claims. Note col. 8, lines 50-58.

It would have been obvious to one of ordinary skill in the art to modify Yamada in view of Conboy and model the upcoming work along the work that a reticle has already performed to determine when to replace a reticle prior to failure and reduce downtime of the machine.

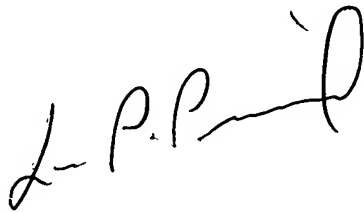
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakahara 2004/0017556 (paragraph 0172) and Matsumoto 6,517,304 (col. 9, lines 12-15) are of interest in prepositioning. Weisler et al. 7,058,627; Lee et al. 2005/0216117; Albrecht et al.2005/0090925 are of interest in reticle management.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R. Garland whose telephone number is 571-272-3741. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2125

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



SRV

Steven R Garland
Examiner
Art Unit 2125

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100